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**EXECUTIVE SUMMARY**

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### **INTRODUCTION**

Pursuant to the California Environmental Quality Act (CEQA), this Environmental Impact Report (EIR) has been prepared to address the potential environmental impacts associated with the South Coast Air Quality Management District's 2007 Air Quality Management Plan (AQMP). As discussed below, the AQMP is the planning document that sets forth policies and measures to achieve federal and state air quality standards in the region.

#### **California Environmental Quality Act**

CEQA Public Resources Code Section 21000 et seq., requires that the potential environmental impacts of proposed projects be evaluated and that feasible methods to reduce or avoid identified significant adverse environmental impact from these projects be identified.

To fulfill the purpose and intent of CEQA, the South Coast Air Quality Management District (SCAQMD) staff has prepared this EIR to address the potential environmental impacts associated with the 2007 revision to the AQMP. Prior to making a decision on the 2007 AQMP, the lead agency decision makers must review and certify the EIR as providing adequate information on the potential adverse environmental impacts of the AQMP.

#### **Notice of Preparation/Initial Study**

A Notice of Preparation (NOP) and Initial Study for the draft 2007 AQMP EIR (included as Appendix A of this EIR) were distributed to responsible agencies and interested parties for a 30-day review and comment period ending December 13, 2007. The Initial Study identified potential adverse impacts in the following environmental topics: air quality; energy; hazards and hazardous materials; hydrology and water quality; and solid/hazardous waste. The EIR also includes detailed responses to all 9 comment letters received on the Initial Study (Appendix B).

#### **EIR Format**

The overall format of the EIR is as follows:

- Executive Summary
- Chapter 1: Introduction
- Chapter 2: Project Description
- Chapter 3: Environmental Setting
- Chapter 4: Environmental Impacts and Mitigation Measures
- Chapter 5: Cumulative Impacts
- Chapter 6: Alternatives

Chapter 7: Other CEQA Topics

Chapter 8: References

Chapter 9: Acronyms

## **SUMMARY: CHAPTER 2 - PROJECT DESCRIPTION**

Implementation of the 2007 AQMP control strategies requires a cooperative partnership of governmental agencies at the federal, state, regional and local level. At the federal level, the U.S. Environmental Protection Agency (U.S. EPA) is charged with regulation of on-road motor vehicle standards; trains, airplanes, and ships; certain non-road engines; and off-shore oil development. The California Air Resources Board (CARB) also oversees on-road emission standards, fuel specifications, some off-road sources and consumer product standards. At the regional level, the SCAQMD is responsible for stationary sources and some mobile sources. In addition, the SCAQMD has lead responsibility for the development of the AQMP. Furthermore, at the local level, the Southern California Association of Governments (SCAG) has a dual role of leader and coordinator. In their leadership role, they, in cooperation with local jurisdictions and sub-regional associations, develop strategies for these jurisdictions to implement. As a coordinator, they facilitate the implementation of these strategies (i.e., transportation control measures).

Chapter 2 describes existing air quality regulations and details the proposed approach for the 2007 revision to the AQMP.

### **Current Control Strategy**

The AQMP strategy being implemented (i.e., 2007 AQMP) includes measures which address stationary, mobile, and indirect sources. While the 2003 AQMP has not been approved by the U.S. EPA into the SIP, the SCAQMD continues to implement the 2003 AQMP. Progress in implementing the 2003 AQMP can be measured by the number of control measures that have been adopted as rules and the resulting tons of pollutants targeted for reduction by agencies that have the statutory authority to implement such measures. The primary focus of the SCAQMD's efforts had been the adoption and implementation of predominantly VOC and PM<sub>10</sub>, and to a lesser extent by NO<sub>x</sub> control measures. CARB, however, is focusing on NO<sub>x</sub> reductions, in addition to VOC. All measures are based on feasible methods of attaining ambient air quality standards.

### **2007 AQMP Control Strategy**

The overall control strategy for the Draft 2007 AQMP is designed to meet applicable federal and state requirements, including attainment of all ambient air quality standards. The focus of the latest AQMP is to demonstrate attainment of the federal PM<sub>2.5</sub> ambient air quality standard by 2015 and the federal eight-hour ozone standard by 2024 while making expeditious progress toward attainment of state standards. The proposed strategy, however, does not attain the previous federal one-hour ozone standard by 2010 as previously required prior to the recent change in federal regulations.

The proposed control measures in the Draft 2007 AQMP are based on implementation of all feasible control measures through the application of available technologies and management practices as well as development and implementation of advanced technologies and control methods. These measures rely on proposed actions to be taken by several agencies that currently have the statutory authority to implement such measures. Similar to the 2003 AQMP approach, the SIP commitment is to implement each control measure in a specified timeframe. Each agency is also committed to achieving a total emission reduction target with the ability to substitute for control measures deemed infeasible, so long as equivalent reductions are met by other means. These measures are also designed to satisfy the federal Clean Air Act requirement of reasonably available control technologies [Section 172(c)], and the California Clean Air Act requirement of Best Available Retrofit Control Technologies (BARCT) [Health and Safety Code Section 40919, Subsection C].

The SCAQMD staff has developed stationary source control measures and the Southern California Association of Governments (SCAG) has developed Transportation Control Measures (TCMs). In addition to SCAQMD and SCAG's measures, the Draft 2007 AQMP includes additional short- and mid-term control measures to reduce emissions from sources that are primarily under State and federal jurisdiction. A large percentage of emission sources in the district are primarily under state (CARB) or federal (U.S. EPA) jurisdiction. These sources include on-road and off-road mobile sources and consumer products. On January 31, 2007, CARB released its draft proposed strategy for California's 2007 State Implementation Plan, which identifies a number of near-term control measures aimed at reducing emissions from mobile sources and consumer products. The proposed state measures along with the SCAQMD's proposed measures do not provide adequate level of reductions for PM<sub>2.5</sub> attainment by 2015.

In light of this reduction gap, the SCAQMD staff has prepared a menu of control measures that can close the gap and bring the Basin into PM<sub>2.5</sub> attainment by 2015. This comprehensive control strategy for attaining both PM<sub>2.5</sub> and ozone standards would be submitted to U.S. EPA for approval by June 2007. The proposed modifications to the draft 2007 AQMP control strategy for sources under state and federal jurisdiction consists of two components: 1) CARB's Draft Proposed State Strategy; and 2) Proposed Additional Mobile Source and Consumer Products Control Measures (proposed by the SCAQMD).

To ultimately achieve the PM<sub>2.5</sub> and eight-hour ozone ambient air quality standards and demonstrate attainment, significant additional short- and mid-term as well as long-term emissions reductions will be necessary from sources including those primarily under the jurisdiction of CARB (e.g., on-road motor vehicles, off-road equipment, and consumer products) and U.S. EPA (e.g., aircraft, ships, trains, and pre-empted off-road equipment). Without an adequate and fair-share level of reductions from all sources, the emissions reduction burden would unfairly be shifted to stationary sources that are already stringently regulated. Moreover, the SCAQMD will continue to use its available

regulatory authority to further control mobile source emissions where federal or state action does not meet regional needs.

### **SUMMARY: CHAPTER 3 - ENVIRONMENTAL SETTING**

Chapter 3 provides a detailed description of the existing setting of environmental areas identified as having potential significant impacts from the proposed project.

#### **Air Quality**

Over the last one and a half decades, there has been significant improvement in air quality in the SCAQMD's jurisdiction. Nevertheless, some air quality standards are still exceeded frequently and by a wide margin. Of the National Ambient Air Quality Standards (NAAQS) established for seven criteria pollutants (ozone, lead, sulfur dioxide, nitrogen dioxide, carbon monoxide, particulate matter smaller than 10 micron (PM10), and particulate matter smaller than 2.5 micron (PM2.5)), the South Coast Air Basin is in attainment with the state and national standards with the exception of ozone, PM10, and PM2.5. California standards are more stringent than the federal standards, and in the case of PM10 and sulfur dioxide (SO<sub>2</sub>), far more stringent. The SCAQMD monitors levels of various criteria pollutants at 34 monitoring stations. Air quality in the Basin continues to improve, with recent years registering the lowest levels since measurements began five decades ago.

In 2005, the Basin exceeded the federal standards for ozone, PM10 or PM2.5 on a total of 89 days at one or more locations; this compares to 128 days in 2003 and 94 days in 2004 (based on the current eight-hour average federal standard for ozone). Despite the substantial improvement in air quality over the past few decades, some areas in the Basin still exceed the National Ambient Air Quality Standard (NAAQS) for ozone more frequently than any other area of the United States. In 2005, the location in the nation most frequently exceeding the federal standard levels for ozone was within the Basin. Also, five of the ten locations in the nation that most frequently exceeded the eight-hour average federal ozone standard level were located in the Basin. The Basin has technically met the CO standards since 2003. Re-designation for attainment for the federal CO standard has been requested, the U.S. EPA has proposed re-designation in a 30-day public notice published in the Federal Register (Vol. 72, FR, page 6986) on February 14, 2007. The public comment period closes March 16, 2007, so the final action is still pending at this time.

Unlike primary criteria pollutants that are emitted directly from an emission source, ozone is a secondary pollutant. It is formed in the atmosphere through a photochemical reaction of VOC, oxides of nitrogen (NO<sub>x</sub>), oxygen, and other hydrocarbon materials with sunlight. Locations within the AQMD's jurisdiction exceed the federal ozone standard far more frequently than any other areas in the United States. Ozone levels in the AQMD jurisdiction exceeded the federal standard by the widest margin compared to other criteria pollutants.

PM10 and PM2.5 includes a complex mixture of man-made and natural substances including sulfates, nitrates, metals, elemental carbon, sea salt, soil, organics and other materials. The Basin has been steadily progressing towards meeting this federal annual average PM10 standard, which was recently revoked by U.S. EPA. The federal maximum 24-hour concentration standard for PM10 was exceeded in the Basin only one time in 2005. Maximum 24-hour average concentration of PM2.5 has increased at some locations compared to 2001. The PM2.5 annual average concentrations and the highest 98<sup>th</sup> percentile PM2.5 concentrations (which the federal 24-hour PM2.5 standard is based on), however, are lower than 2001 levels at all locations monitored.

## **Energy**

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the U.S. Department of Transportation (U.S. DOT), U.S. Department of Energy (U.S. DOE), and U.S. EPA are three agencies with substantial influence over energy policies and programs. On the state level, the California Public Utilities Commission (CPUC) and California Energy Commission (CEC) are two agencies with authority over different aspects of energy.

The California Energy Commission collects and analyzes energy-related data, prepares statewide energy policy recommendations and plans, promotes and funds energy efficiency programs, and regulates the power plant siting process.

Recent energy use figures show that in 2005, 37 percent of California's petroleum came from in-state, with 21 percent coming from Alaska, and 42 percent being supplied by foreign sources. In 1999, 78 percent of the state's electricity was self generated, and 22 percent came from out-of-state. As for natural gas in 2005, 38 percent came from the Southwest, 23 percent from Canada, 15 percent from in state, and 24 percent from the Rockies.

One of the key areas of concern in the energy sector is reducing the amount of petroleum based fuels in the District. Consumption of these fuels is a major factor in the amount of criteria pollutants in southern California. Alternative fuels play an important role in the strategy to reach attainment in the region. Renewable energy resources include: biomass, hydro, geothermal, solar and wind.

## **Hazards and Hazardous Materials**

The potential for hazards is a factor in the production, use, storage, and transportation of hazardous materials. The term "hazardous material" is defined in different ways for different regulatory programs. For the purposes of this EIR, the term "hazardous materials" refers to both hazardous materials and hazardous wastes. Hazardous materials may be found at industrial production and processing facilities. Examples of hazardous materials used on a consumable basis include petroleum, solvents, and coatings. Hazardous materials are stored at facilities producing such materials and at facilities where hazardous materials are part of the production processes. Specifically, storage

refers to the bulk handling of hazardous materials before and after they are transported to the general geographical area of use. Currently, hazardous materials are transported throughout the District in great quantities via all modes of transportation including rail, highway, water, air and pipeline.

Hazard concerns are related to the risks of explosions or the release of hazardous substances or exposure to air toxics. State law requires detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of to prevent or mitigate injury to health or the environment in the event that such materials are accidentally released. Federal laws, such as the Emergency Planning and Community-Right-To-Know Act of 1986 (also known as Title III of the Superfund Amendments and Reauthorization Act or SARA) impose similar requirements. These requirements are enforced by the California Office of Emergency Services. In 2005, there were a total of 2,901 releases of hazardous materials reported in the Los Angeles, Orange, Riverside and San Bernardino counties, or an average of about 242 incidents per month.

### **Hydrology and Water Quality**

The Federal Safe Drinking Water Act, enacted in 1974 and implemented by the U.S. EPA, imposes water quality and infrastructure standards for potable water delivery systems nation-wide. The California Safe Drinking Water Act was enacted in 1976. Potable water supply is managed through local agencies and water districts, the State Department of Water Resources (DWR), the Department of Health Services (DHS), the State Water Resources Control Board (SWRCB), the U.S. EPA, and the U.S. Bureau of Reclamation. The DWR manages the State Water Project (SWP), and compiles planning information on supply and demand within the state.

The DWR divides the state into ten hydrologic regions. Some regions contain a great deal of water, some regions are very dry and must have their water imported by aqueducts. The South Coast Air Basin lies within the South Coast Hydrologic Region. The cities of Los Angeles, Long Beach, Santa Ana, San Bernardino, and Big Bear Lake are among the many urban areas in this section of the state. The Santa Clara, Los Angeles, San Gabriel, and Santa Ana Rivers are among the area's hydrologic features. Most lakes in this area are actually reservoirs, made to hold imported water.

Imported sources of water (including the Colorado River Aqueduct (CRA), the State Water Project's California Aqueduct, and the Los Angeles Aqueduct currently supply more than six million-acre-feet of water to the southern California region annually. Imported sources account for approximately 74 percent of the total water used in the region. Local water resources, which include groundwater and captured surface water runoff, are fully developed and are expected to remain relatively stable in the future on a region-wide basis. Several groundwater basins in the region are threatened by overdraft conditions, increasing levels of salinity, and contamination by agricultural land to urban development, thereby reducing the land surface available for groundwater recharge. Increasing demand for groundwater may also be limited by water quality, since levels of

salinity in sources currently used for irrigation could be unacceptably high for domestic use without treatment.

The SWRCB, and the nine regional water quality control boards (RWQCB), are responsible for protecting surface and groundwater supplies in California. In particular, the SWRCB establishes water-related policies and approves water quality control plans, which are implemented and enforced by the RWQCBs. Five RWQCBs have jurisdiction over areas within the boundaries of the SCAQMD. These agencies also regulate discharges to state waters through federal pre-treatment requirements enforced by the publicly owned treatment works (POTWs).

Water quality of regional surface water and groundwater resources is affected by point source and non-point source discharges occurring throughout individual watersheds. Regulated point sources, such as wastewater treatment effluent discharges, usually involve a single discharge into receiving waters. Non-point sources involve diffuse and non-specific runoff that enters receiving waters through storm drains or from unimproved natural landscaping. Within the regional Basin Plans, the RWQCBs establish water quality objectives for surface water and groundwater resources and designate beneficial uses for each identified waterbody.

Much of the urbanized areas of Los Angeles and Orange Counties are serviced by three large POTWs operating on the coast: the City of Los Angeles Bureau of Sanitation Hyperion Facility, the Joint Outfall System of the Los Angeles County Sanitation Districts (LACSD), and the Orange County Sanitation District (OCSd) treatment plant. Each of these facilities discharges an average of over 250 million gallons per day.

### **Solid/Hazardous Waste**

A total of 25 Class III active landfills and two transformation facilities (i.e., waste-to-energy facilities) are located within the district with a total capacity of 97,269 tons per day. Permit requirements, capacity and surrounding land use are three of the dominant factors limiting the operations and life of landfills in the South Coast Air District. Landfills are permitted by the local enforcement agencies with concurrence from the California Integrated Waste Management Board (CIWMB). Local agencies establish the maximum amount of solid waste that can be received by a landfill each day, and the operational life of a landfill. Landfills are operated by both public and private entities (CIWMB, 2002a). Landfills in the district are also subject to requirements of the SCAQMD as they pertain to gas collection systems, dust and impacts.

There are no hazardous waste disposal sites within the South Coast Air Basin. Hazardous waste generated at area facilities, which is not reused on-site, or recycled off-site, is disposed of at a licensed in-state hazardous waste disposal facility. Two such facilities are the Chemical Waste Management Inc. (CWMI) Kettleman Hills facility in King's County, and the Clean Harbors (formerly Safety-Kleen) facility in Buttonwillow (Kern County). Kettleman Hills has an estimated 2.5 million cubic yard capacity and expects to continue receiving wastes for approximately 3-4 years. Buttonwillow receives



approximately 960 tons of hazardous waste per day and has a remaining capacity of approximately nine million tons. The expectant life of the Buttonwillow Landfill is approximately 40 years. Hazardous waste also can be transported to permitted facilities outside of California.

The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) is responsible for the permitting of hazardous waste transfer, disposal, and storage facilities. The DTSC conducts annual inspections of hazardous waste facilities. Other inspections can occur on an as-needed basis.

California Department of Transportation (Caltrans) sets standards for trucks in California. The regulations are enforced by the California Highway Patrol. Truck transporting hazardous wastes are required to maintain a hazardous waste manifest. The manifest is required to describe the contents of the material within the truck so that wastes can readily be identified in the event of a spill.

## **SUMMARY: CHAPTER 4 - ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Chapter 4 – Environmental Impacts and Mitigation Measures, provides a detailed review of the environmental topics that were identified in the NOP and Initial Study where potentially significant adverse impacts were identified (see Appendix A). Each of the proposed control measures was evaluated to determine the environmental topics that would potentially be impacted, if the control measure or strategy was adopted. The following subsections provide a brief discussion of the potential environmental impacts and mitigation measures for each environmental category analyzed. Table ES-2 provides a summary of the impacts identified under each resource category, identifies mitigation measures that were imposed (if applicable), and identifies the remaining impacts following mitigation. A summary of each control measure and resources that would be potentially impacted by their implementation is provided in Table ES-3.

### **Air Quality**

Subchapter 4.1 identifies the potential secondary air quality impacts as a result of implementing stationary and mobile control measures in the Draft 2007 AQMP. The analysis of potential air quality impacts include impacts from construction and operation activities associated with implementing the proposed control measures. Construction impacts evaluated include dust suppression, secondary impacts from mobile source, and general construction related to control measures. Operation impacts evaluated include secondary impacts from increased electrical demands, secondary impacts from control of stationary sources, secondary emissions from consumer products, secondary impacts from mobile source and transportation control measures, secondary impacts from miscellaneous sources, and impacts from non-criteria pollutants. Examples of secondary air quality impacts include emissions from control equipment (such as afterburners), potential additional emissions from electric power generating equipment because of projected increases in demand for electricity. Every control measure in the Draft 2007 AQMP was evaluated for potential effects on air quality, grouped together into categories

(e.g., coating and solvent reformulation, transportation measures, dust suppression, etc.), and then evaluated for their potential to create significant adverse air quality impacts. To determine whether air quality impacts for adopting and implementing the AQMP as a whole are significant, impacts are evaluated and compared to significance criteria.

The analysis of secondary air quality impacts indicated that potentially significant impacts could be expected for: (1) NO<sub>x</sub> emissions associate with transportation of materials (i.e., oxygenates) to and from the Basin and (2) emissions from construction activities.

The objective of the Draft 2007 AQMP is to attain or maintain all state and federal ambient air quality standards. Based upon the modeling analyses described in Chapter 4.1 of this document, implementation of all control measures contained in the Draft 2007 AQMP is anticipated to bring the District into compliance with federal standards for all pollutants by the year 2024.

## **Energy**

Subchapter 4.2 identifies the potential energy impacts as a result of implementing stationary and mobile control measures in the 2007 AQMP. The EIR evaluated the potential impacts of the AQMP on electricity, natural gas, petroleum fuels, and alternative fuels.

The increase in electricity associated with the control measures and strategies in the 2007 AQMP is considered to be less than significant. While there may be an increase in electricity associated with the 2007 AQMP control measures, the overall increase in electricity is expected to be less than significant as compared to the overall electrical use in the district. No significant impacts are expected due to increased electricity demand.

The energy impacts associated with implementation of the control measures and strategies in the 2007 AQMP are expected to result in an increase in natural gas demand. The increased demand for natural gas is considered to be less than significant. In addition, sufficient natural gas resources are available so that no significant impacts associated with natural gas resources are expected.

The energy impacts associated with implementation of the control measures and strategies in the 2007 AQMP are expected to result in a reduction in use (less demand) of petroleum fuels so that no significant impacts on petroleum fuels are expected.

Although an increase in demand for hydrogen as a transportation fuel is expected due to implementation of the control measures and strategies in the 2007 AQMP, this increase is not expected to be significant since hydrogen is available or the feedstock that produces it is generally available. Future demand is expected to be met through increased production. The energy impacts associated with the future use of hydrogen is expected to be less than the current strategy that uses predominately petroleum based fuels so that no significant hydrogen demand impacts are expected.

The design and goal of the 2007 AQMP is to shift to less polluting transportation fuels. Although an increase in alternative transportation fuels is expected, this increase is not expected to be significant since alternative fuels (e.g., natural gas and hydrogen) are available or the feedstock that produces the fuels are generally available.

### **Hazards**

Subchapter 4.3 – Hazards, evaluated the hazard impacts from the following: reformulated coatings, solvents and consumer products, refineries modifications to produce reformulated fuels, use of alternative fuels, ammonia use in SCRs, and fuel additives.

Potentially significant impacts were identified for refinery modifications to produce reformulated fuels, and the use of ammonia in SCRs. However, the use of aqueous ammonia at concentrations less than 20 percent by volume is expected to reduce hazard impacts associated with ammonia use to less than significant.

The only impact area that is expected to remain significant, following mitigation, is refinery modifications. Although the specific modifications to the refineries associated with the 2007 AQMP control measures are currently unknown, the hazard impacts are considered to be potentially significant. Based on the analysis from previous refinery modifications, it is expected that some of these modifications would result in significant hazard impacts, resulting in an increase in exposure to hazardous materials/flammable materials to the surrounding population. The 2007 AQMP could result in significant hazard impacts at refineries.

### **Hydrology and Water Quality**

Subchapter 4.4 – Hydrology and Water Quality, identifies potential water resource impacts that may result from implementation of the 2007 AQMP. The impact analysis includes both water quality and water demand. The hydrology and water quality impacts associated with reformulated coatings, solvents and consumer products, dust suppression, alternative transportation fuels, electric vehicles, add-on pollution control equipment, and water demand were evaluated.

Potentially significant impacts were identified for reformulated solvents, coatings and consumer products, the potential illegal disposal of batteries, and water demand. Mitigation measures were developed for each of these impact categories. The mitigation measures were expected to reduce the potential hydrology/water quality impacts to less than significant.

### **Solid/Hazardous Waste**

Subchapter 4.5 – Solid/hazardous waste, identifies the potential solid/hazardous waste impacts as a result of implementing stationary and mobile control measures in the 2007 AQMP. The analysis in the EIR included evaluation of solid waste impacts from spent batteries from electric vehicles, potential solid waste impacts due to air pollution control

technologies, carbon adsorption, particulate filtration equipment, catalytic oxidation, and early retirement of equipment.

The potential impacts associated with the additional spent batteries and spent carbon were considered to be potentially significant and mitigation measures were developed. Overall, the potential impacts of the 2007 AQMP of solid/hazardous waste were considered less than significant because most of the waste streams that would be generated could be recycled.

See Table ES-3 for a more detailed analysis of the project impacts, mitigation measures, and remaining or residual impacts.

## **SUMMARY: CHAPTER 5 – CUMULATIVE IMPACTS**

CEQA Guidelines §15130(a) requires an EIR to discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in §15065(a)(3). A program EIR essentially evaluates the cumulative impacts associated with a variety of regulatory activities. As such, the 2007 AQMP EIR evaluates the environmental impacts associated with implementation of various stationary and mobile source control measures. The South Coast Air Basin covers a large area, that consists of 6,745 square-miles and includes all of Orange County, and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties.

The cumulative impacts for the 2007 AQMP EIR will include the regulatory activities associated with other air quality control measures that could also generate impacts within the South Coast Air Basin. These control measures are associated with the TCMs developed by SCAG. The following subsections include impact conclusions determined by the analysis of the TCMs, as well as the 2007 AQMP EIR.

### **Aesthetics**

Cumulative aesthetic impacts are expected to remain significant because it is likely that there will be situations where visual impacts cannot be mitigated to a less than significant level. Cumulative impacts would remain significant because the population growth projected by 2030 in combination with the projects in the 2004 RTP would consume currently vacant land that would create significant contrasts with the overall visual character of the existing landscape setting.

### **Agriculture Resources**

Cumulative agricultural resource impacts are expected to remain significant following mitigation as the 2004 RTP is expected to contribute to the loss and disturbance of agricultural lands.

## **Air Quality**

Cumulative air quality impacts associated with construction activities are expected to remain significant following mitigation. Cumulative air quality impacts on criteria pollutants due to the operational phases are expected to be less than significant. Cumulative air quality impacts on toxic air contaminants and greenhouse gases are expected to be less than significant.

## **Biological Resources**

Although many measures can be employed to minimize the potentially adverse biological resource impacts, cumulative impacts on biological resources are expected to remain significant.

## **Cultural Resources**

Due to the size and potentially large number of historic properties, archaeological resources, and paleontological resources in southern California that could be disturbed as a result of the combined projects, cumulative cultural resource impacts are expected to remain significant following mitigation.

## **Energy**

The regional increase in transportation-related energy demand as a result of implementing the 2004 RTP and 2007 AQMP is expected to remain a significant adverse cumulative impact, even with the above mitigation. Other cumulative energy impacts associated with the 2004 RTP and 2007 AQMP are considered to be less than significant.

## **Geology and Soils**

Mitigation measures are expected to reduce the potentially significant seismic and expansive soils impacts to less than significant. Given the topography, ecology and meteorology of southern California region, cumulative geology and soils impacts are expected to remain significant for long-term erosion and the potential for slope-failure.

## **Hazards and Hazardous Materials**

The potential cumulative impacts associated with hazardous materials transportation, and the transportation of hazardous materials within one-quarter mile of schools are expected to remain significant.

The potential cumulative hazards and hazardous materials impacts on the disposal of hazardous materials from construction and maintenance of transportation facilities, and the potential to uncover contaminated properties are expected to be less than significant following mitigation.

## **Hydrology and Water Quality**

The additional control measures are expected to create adverse water quality and waste discharge conditions and/or unfavorably alter existing drainage patterns in a manner that would result in substantial erosion or siltation, generating potentially significant cumulative impacts. The 2004 RTP's influence on growth distribution is a cumulatively considerable contribution to this significant impact. Given current conditions, the 2004 RTP's effects on stormwater infiltration and groundwater recharge would contribute to a significant cumulative impact on regional water resources. The 2004 RTP's effects on population distribution and its associated contribution to the impact of flooding hazards are significant.

The mitigation measures would lessen the impacts on wastewater treatment capacity in the region; however, they are not expected to prevent an imbalance between the demand for regional capacity and existing regional capacity. The cumulative impacts of wastewater treatment capacity is expected to remain significant following mitigation.

## **Land Use and Planning**

Implementation of the 2004 RTP would result in a potentially substantial loss and/or disturbance of open space and recreation lands, resulting in potentially significant adverse cumulative land use impacts.

In some instances, the 2004 RTP is expected to conflict with currently adopted general plans, which will need to be updated, especially general plans that are known to be out of date. Thus, the impact would remain potentially significant.

In order to accommodate six million more people as projected by 2030, the region will need to change land uses and increase the intensity of some existing land use. The cumulative land use impacts are expected to remain significant.

## **Mineral Resources**

No significant project specific or cumulative impacts were identified for mineral resources.

## **Noise**

The mitigation measures would reduce noise impacts; however, cumulative construction noise impacts would still be significant in the short-term.

Although mitigation measures would reduce operational noise impacts, they may not reduce noise levels to below regulatory levels, therefore, the cumulative noise impacts would remain significant following mitigation.

## **Population and Housing**

The policies included in the 2004 RTP seek to direct growth in a way that is efficient for both mobility and land consumption. However, implementation of the RTP would help distribute growth to certain vacant areas of the region. Thus, the cumulative impacts on population and house are considered significant.

Not all of the projects in the 2004 RTP will be able to be built in existing rights-of-way. A substantial number of businesses and residences likely would be displaced through the development of projects in the 2004 RTP generating potentially significant adverse cumulative population and housing impacts.

The 2004 RTP proposes projects that have the potential to disrupt or divide communities and, considering the scale and number of these projects, impacts cannot be mitigated to a less than significant level, generating potentially significant adverse cumulative population and housing impacts.

The accessibility afforded by the 2004 RTP, and the expected shifts in population, households, and employment associated with the mobility benefits would change the growth patterns in the region, generating potentially significant adverse cumulative population and housing impacts.

## **Public Services**

The cumulative public service impacts on emergency response and impacts on underground utility lines are expected to be mitigated to less than significant. The following cumulative adverse impacts on public services are considered to remain significant following mitigation:

- The cumulative impacts on fire threats would remain significant because development would occur in areas that have a high, very high, or extreme threat of fire.
- The demand to hire and train approximately 22,000 police personnel and 7,000 fire and emergency personnel would remain a significant impact.
- The region's cumulative demand for approximately 1,000 new schools and approximately 50,000 new teachers would be a significant impact on public services.
- The regional increase in transportation-related energy demand as a result of implementing the 2004 RTP would and 2007 AQMP is expected to remain significant.

## **Recreation**

The cumulative impacts on recreation are addressed in Section 5.11 – Land Use.

### **Solid/Hazardous Waste**

The cumulative impacts on solid/hazardous waste are expected to be less than significant following mitigation.

### **Transportation/Traffic**

Implementation of mitigation measures identified in the 2004 RTP would be expected to reduce VMT; however, even with mitigation, the 2030 VMT would be substantially greater than the existing VMT. Therefore, the increase in VMT would remain a significant adverse cumulative transportation and traffic impact.

Implementation of feasible mitigation measures identified in the 2004 RTP would be expected to reduce delay for all vehicles, however even with mitigation, the 2030 total delay would be substantially greater than the existing delay. Therefore, the increase in total delay would remain a significant adverse cumulative transportation and traffic impact.

Implementation of measures beyond those institutionally and economically feasible measures identified in the 2004 RTP would be expected to reduce delay for the flow of heavy duty truck transport, however even with mitigation, the 2030 heavy-duty truck transport delay would be substantially greater than the existing delay. Therefore, the increase in heavy-duty truck transport delay would remain a significant adverse cumulative transportation and traffic impact.

The increase, between 2000 and 2030, in the percent of work trips accessible within 45 minutes travel time by auto or transit would be a beneficial transportation and traffic impact.

The decrease, between 2000 and 2030, of the system-wide fatality and injury accident rates would provide a beneficial transportation and traffic impact.

### **SUMMARY: CHAPTER 6 – ALTERNATIVES**

The following alternatives were evaluated in the EIR:

Alternative 1, No Project: CEQA requires the specific alternative of no project to be evaluated. A No Project Alternative consists of what would occur if the project was not approved; in this case, not adopting the 2007 AQMP. The net effect of not adopting the 2007 AQMP would be a continuation of implementing the 2003 AQMP.

Alternative 2, Combined VOC and NO<sub>x</sub> Reductions: The Alternative 2 scenario recreates the traditional AQMP reductions strategy to determine attainment whereby VOC and NO<sub>x</sub> emissions are reduced in approximate equal combinations to ensure the ozone standard is attained. The basic concept focuses on maximizing the VOC reductions to



reach ozone attainment while minimizing the NO<sub>x</sub> reductions needed once PM<sub>2.5</sub> standards are attained.

Under Alternative 2, about 45 TPD less NO<sub>x</sub> emission reductions are required than the proposed project, but an additional 230 TPD of VOC reductions are required than the proposed project. Thus, anticipated air quality benefits achieved under Alternative 2 is the only identified alternative to the proposed project that would also achieve the federal eight-hour ozone and PM<sub>2.5</sub> standards and be least toxic, so Alternative 2 is considered environmentally superior to Alternative 1, no project. However, Alternative 2 is not expected to be environmentally superior to the proposed project because an additional 230 TPD of VOC emission reductions would be required, with the related increase in environmental impacts. Table ES-1 presents a matrix that lists the significant adverse impacts as well as the cumulative impacts associated with the proposed project and the project alternatives for all environmental topics analyzed. The table also ranks each section as to whether the proposed project or a project alternative would result in greater or lesser impacts relative to one another.

**TABLE ES-1**

**Environmental Impacts of Alternatives As Compared to Proposed Project**

<b>ENVIRONMENTAL TOPIC</b>	<b>Proposed Project 2007 AQMP</b>	<b>No Project Alternative 1<sup>(1)</sup></b>	<b>Alternative 2<sup>(1)</sup></b>
<b>Air Quality</b>			
Construction Activities	S	S (-)	S (=)
Electricity Generation	NS	NS (-)	NS (+)
Use of Lower VOC Materials	NS	NS (-)	NS (+)
Impacts from Mobile Sources	NS	NS (-)	NS (-)
Impacts from Misc. Sources	NS	NS (-)	NS (-)
Non-Criteria Pollutants	NS	NS (-)	NS (+)
GHG Emissions	B	PS (+)	NS (-)
Ambient Air Quality	B	S (+)	B(=)
<b>Energy</b>			
Electricity Demand	NS	NS (-)	NS (-)
Natural Gas Demand	NS	NS (-)	NS (-)
Petroleum Fuel Use	NS	NS (+)	NS (+)
Alternative Fuels	NS	NS (-)	NS (-)
<b>Hazards</b>			
Reformulated Coatings	NS	NS (-)	NS (+)
Refinery Hazards	S	NS (-)	S (=)
Alternative Fuels	NS	NS (-)	NS (-)
Ammonia Use	NS	NS (-)	NS (=)
Fuel Additives	NS	NS (-)	NS (=)

TABLE ES-1 (Concluded)

ENVIRONMENTAL TOPIC	Proposed Project 2007 AQMP	No Project Alternative 1 <sup>(1)</sup>	Alternative 2 <sup>(1)</sup>
<b>Hydrology/Water Quality</b>			
Wastewater Discharge	MNS	NS (-)	MNS (+)
Chemical Dust Suppressants	NS	NS (-)	NS (=)
Alternative Fuel Use	NS	NS (-)	NS (=)
Illegal Battery Disposal	S	NS (-)	S (=)
Add-on Control Equipment	NS	NS (-)	NS (=)
Water Demand	NS	NS (-)	NS (+)
<b>Solid/Hazardous Waste</b>			
Spent Batteries	NS	NS (-)	NS (=)
Air Pollution Control Equip.	NS	NS (-)	NS (=)
Additional Filters/PM	NS	NS (-)	NS (=)
Catalytic Oxidation	NS	NS (-)	NS (=)
Old Equipment/Vehicle Disposal	NS	NS (-)	NS (=)

Notes:

S = Significant

NS = Not Significant

MNS = Mitigated Not Significant

B = Beneficial

(-) = Potential impacts are less than the proposed project.

(+) = Potential impacts are greater than the proposed project.

(=) = Potential impacts are approximately the same as the proposed project.

## SUMMARY: CHAPTER 7 – OTHER CEQA TOPICS

### Relationship Between Short-term Uses and Long-Term Productivity

Implementing the 2007 AQMP is not expected to achieve short-term goals at the expense of long-term environmental productivity or goal achievement. The purpose of the 2007 revision of the AQMP is to set forth a comprehensive control program that will lead the Basin into compliance with all federal air quality standards while making progress toward state air quality standards. By attaining federal air quality standards, the AQMP is expected to enhance short and long-term environmental productivity in the region.

### Significant Irreversible Environmental Changes

Implementation of the 2007 AQMP is not anticipated to result in any significant irreversible adverse environmental changes. The AQMP would place only an incremental demand on nonrenewable and limited resources, such as energy and water supplies, relative to the accelerated rate of use of these resources due to population growth and increased consumer demand. The largely irretrievable conversion of undeveloped/agricultural land to urban uses is a function of the growing population and local land use authority, not the 2007 AQMP. The 2007 AQMP is expected to result in long-term benefits associated with a reduction in the use of petroleum-based fuels.

### **Growth-Inducing Impacts**

Growth-inducing impacts can generally be characterized in three ways: (1) a project includes sufficient urban infrastructure to result in development pressure being placed on less developed adjacent; (2) a large project affects the surrounding community by producing a “multiplier effect,” which results in additional community growth; and (3) a new type of development is allowed in an area, which subsequently establishes a precedent for additional development of a similar character. None of the above scenarios characterize the project evaluated in the EIR.

**TABLE ES-2**  
**Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts**

IMPACT	MITIGATION MEASURES	RESIDUAL IMPACT
<b>AIR QUALITY</b>		
No significant adverse secondary air quality impacts from dust suppression activities were identified. The secondary impacts associated with construction activities are potentially significant for PM10 emissions	Develop a Construction Traffic Emission Management Plan for the proposed project. The Plan shall include measures to minimize emissions from vehicles including: scheduling truck deliveries to avoid peak hour traffic, consolidating truck deliveries, and prohibiting truck idling in excess of five minutes. Other measures include: use electricity or alternate fuels for on-site mobile equipment instead of diesel equipment to the extent feasible; maintain construction equipment by conducting regular tune ups and retard diesel engine timing; use electric welders where electricity is available; use on-site electricity rather than temporary power generators where electricity is available; evaluate the feasibility of retrofitting the large off-road construction equipment; use alternative diesel fuels, if commercially available; and Suspend the use of all construction activities during first stage smog alerts.	The emissions associated with construction activities from the proposed 2007 AQMP control measures were considered to be significant for PM10 emissions.
Secondary impacts from increased electricity demand are not significant.	None required since no significant impacts were identified.	Impacts are expected to be less than significant.
Secondary impacts from control of stationary sources are not significant.	None required since no significant impacts were identified.	Impacts are expected to be less than significant.
Secondary impacts from the increased use of lower VOC materials including household and personal care products, and aerosol and other coating products are expected to be less than significant.	None required since no significant impacts were identified.	Impacts are expected to be less than significant.
Secondary impacts from mobile sources are considered, as historic emissions have been associated with increased transportation of oxygenates.	Modifications of existing equipment and installation of new equipment would both be subject to New Source Review, LAER and BACT requirements.	The overall impact of mobile sources due to short-term control measures has been considered less than significant.

TABLE ES-2 (Continued)

## Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts

IMPACT		MITIGATION MEASURES		RESIDUAL IMPACT
AIR QUALITY (Continued)				
Secondary impacts from miscellaneous sources were determined to be less than significant.	None required since no significant impacts were identified.			Impacts are expected to be less than significant.
The impacts associated with non-criteria pollutants were determined to be less than significant.	None required since no significant impacts were identified.			Impacts are expected to be less than significant.
The impacts of the 2007 AQMP is expected to reduce emissions of compounds that contribute to global warming and ozone so no significant impacts were identified.	None required since no significant impacts were identified.			Impacts are expected to be less than significant.
Implementation of the control measures identified in the 2007 AQMP is expected to result in improvements to ambient air quality. Considering the air quality benefits provided by the plan, no significant adverse impacts are expected.	None required since no significant impacts were identified.			The 2007 AQMP is expected to (1) attain the eight-hour federal ozone standard by 2024; (2) maintain compliance with state and federal NO <sub>2</sub> standards (3) maintain compliance with state and federal SO <sub>2</sub> standards; (4) maintain compliance with the federal 24-hour average PM10 standard; (5) attain the federal annual PM2.5 standard by 2015; and (6) maintain compliance with the federal 24-hour standard by 2015
ENERGY				
The increase in electricity associated with the 2007 AQMP control strategies is expected to be less than significant.	None required since no significant impacts were identified.			Impacts are expected to be less than significant.
Although the 2007 AQMP is expected to result in an increase in the use of natural gas, the increase is expected to be less than significant as sufficient natural gas resources are available	None required since no significant impacts were identified.			Impacts are expected to be less than significant.

**TABLE ES-2 (Continued)**  
**Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts**

IMPACT	MITIGATION MEASURES	RESIDUAL IMPACT
<b>ENERGY</b>		
The energy impacts associated with implementation of the control measures and strategies in the 2007 AQMP are expected to result in a reduction in use of petroleum fuels so that no significant impacts on petroleum fuels are expected.	None required since no significant impacts were identified.	Impacts are expected to be less than significant.
The increased used in alternative transportation fuels is not expected to be significant since alternative fuels (e.g., natural gas and hydrogen) are available or the feedstock that produces the fuels are generally available.	None required since no significant impacts were identified.	Impacts are expected to be less than significant.
<b>HAZARDS</b>		
The analysis indicates that the hazard impacts associated with reformulated coatings, solvents and consumer products are expected to be less than significant.	None required since no significant impacts were identified.	Impacts are expected to be less than significant.
The 2007 AQMP could result in significant hazard impacts at refineries due to modifications to produce additional fuels. Based on the analysis from previous refinery modifications, it is expected that some of these modifications would result in significant hazard impacts, resulting in an increase in exposure to hazardous materials/flammable materials to the surrounding population.	To reduce occurrences of an upset condition, a pre-start up safety review will be performed for those additions and proposed modifications, where the change is substantial enough to require a change in the process safety information and/or where an acutely hazardous and/or flammable material would be used. The review will verify the following: (1) Construction and modifications are in accordance with design specifications and applicable codes; (2) Safety, operating, maintenance, and emergency procedures are in place and are adequate; (3) Process hazard analysis recommendations have been addressed and actions necessary for start-up have been completed; (4) Training of each operating employee and maintenance worker has been completed; and (5) Written process safety information is available for the employer and employees to identify and understand the hazards posed by the process.	The mitigation measures are expected to reduce but not eliminate the potential hazard impacts. Therefore, the impacts due to refinery modifications are expected to remain significant.

TABLE ES-2 (Continued)

## Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts

IMPACT		MITIGATION MEASURES		RESIDUAL IMPACT
HAZARDS (continued)				
The hazard impacts associated with the use of alternative fuels were determined to be less than significant.		None required since no significant impacts were identified.		Impacts are expected to be less than significant.
The use of ammonia in SCRs is considered to be potentially significant due to implementation of the control measures.		The use of aqueous ammonia at concentrations less than 20 percent is recommended.		The use of aqueous ammonia at concentrations less than 20 percent by volume in conjunction with additional mitigation measures are expected to reduce hazard impacts to less than significant.
The hazard impacts associated with fuel additives are expected to be less than significant since the use of fuel additives would require evaluation for their potential health and environmental impacts prior to approval and use.		None required since no significant impacts were identified.		Impacts are expected to be less than significant.
HYDROLOGY/WATER QUALITY				
Increased discharge of wastewater exceeding regulatory effluent limits set by the state and implemented by POTWs as a result of the reformulation of solvents are expected to be not significant.		The following mitigation measures were imposed: (1) SCAQMD will provide an outreach and education program for affected parties; (2) Sanitation Districts and other sewage agencies must increase their surveillance programs to quantify measurable effects resulting from this control measure and take appropriate action; and (3) CARB will monitor the use and limit or prohibit the use of toxic air contaminants in reformulated consumer products.		Although the impacts are not expected to be significant, the mitigation measures have been imposed to ensure the potential impacts on POTWs remain less than significant.
The potential water quality impacts from the use of chemical dust suppressants is expected to be less than significant.		None required since no significant impacts were identified.		Impacts are expected to be less than significant.
The use of these alternative fuels is not expected to result in greater adverse water quality impacts than the use of regular diesel fuels and is, therefore, less than significant.		None required since no significant impacts were identified.		Impacts are expected to be less than significant.

**TABLE ES-2 (Continued)**  
**Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts**

IMPACT	MITIGATION MEASURES	RESIDUAL IMPACT
<b>HYDROLOGY/WATER QUALITY (continued)</b>		
Illegal disposal of electric batteries could result in significant water quality impacts by allowing toxic metals or acids to leach into surface or ground waters.	Mitigation measures include: (1) Requiring leasing, deposit, or rebate programs for electric batteries; and (2) Requiring spent battery exchange for battery replacement.	Mitigation measures were developed that are expected to minimize any increase in illegal disposal of batteries to less than significant.
No significant adverse water resource impacts are expected from additional use of add-on control equipment.	None required since no significant impacts were identified.	Impacts are expected to be less than significant.
The control measures that may require add-on control equipment are generally not expected to result in adverse impacts on water demand, as the demand is expected to be within the capacity of water suppliers.	Require the use of native and drought resistant species in tree planting programs to minimize water consumption.	The mitigation measure is expected to minimize the potential impacts to less than significant.
<b>SOLID/HAZARDOUS WASTE</b>		
The analysis indicates that the solid/hazardous waste impacts associated with spent batteries were potentially significant.	Mitigation measures include: (1) Requiring leasing, deposit, or rebate programs for electric batteries; and (2) Requiring spent battery exchange for battery replacement.	The mitigation measure is expected to minimize the potential impacts to less than significant.
No significant solid/hazardous waste impacts were identified for solid waste impacts due to short-term air pollution control technologies as part of the 2007 AQMP.	None required since no significant impacts were identified.	Impacts are expected to be less than significant.
The solid/hazardous waste impacts associated with the use of carbon adsorption are considered significant prior to mitigation.	Recycling and reusing activated carbon should be required to minimize the amount of spent carbon waste being transferred to landfills.	The mitigation measure is expected to minimize the potential impacts to less than significant.
The increase in the amount of waste generated from the use of filters and the collection of additional particulate matter is expected to be small.	None required since no significant impacts were identified.	Impacts are expected to be less than significant.



TABLE ES-2 (Continued)

Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts

IMPACT	MITIGATION MEASURES	RESIDUAL IMPACT
The impacts associated with catalytic oxidation were not expected to be significant, due to the recycling of catalysts.	None required since no significant impacts were identified.	Impacts are expected to be less than significant.
Control measures that would require new equipment will generally require that it occur as the life of the old equipment is exhausted. Therefore, no significant solid/hazardous waste impacts were identified due to implementation of the control measures.	None required since no significant impacts were identified.	Impacts are expected to be less than significant.

TABLE ES-3  
2007 AQMP CONTROL MEASURE ENVIRONMENTAL ANALYSIS

Control Measure No.	AQMP Control Measure Description	Agency	Pollutant	Not Significant	Control Measure	Potential Impact				
						Secondary Air	Energy	Hazard	Water	Solid/Haz Waste
MEASURES TO BE IMPLEMENTED BY THE SCAQMD										
CTS-01	Emission Reductions from Industrial Lubricants	SCAQMD	VOC		Reduce VOC emissions from industrial lubricants. Low-VOC lubricants.	X		X	X	
CTS-02	Clean Coating Certification Program	SCAQMD	VOC	1, 2	Seek to implement an ultra-low VOC content certification program. Incentive program; super compliant coatings.					
CTS-03	Consumer Product Certification and Emission Reductions from Use of Consumer Products at Institutional and Commercial Facilities	SCAQMD	VOC	1, 2	Develop new rules to establish a VOC labeling program & require use of low-or zero-VOC consumer products. Prohibition/limitation of use.					
CTS-04	Emission Reductions from Reduction of VOC Content of Consumer Products not Regulated by the State Board	SCAQMD	VOC		Seek to reduce VOC emissions from unregulated lacquer and paint thinners sold as consumer products by establishing a VOC content limit for each of those categories.	X		X	X	
FUG-01	Improved Leak Detection and Repair	SCAQMD	VOC	2, 3	Use "Smart LDAR" to readily detect a leak. Smart leak detection/repair program.					
FUG-02	Emission Reductions from Gasoline Transfer & Dispensing Facilities (GDF)	SCAQMD	VOC	2, 3	Reduce VOC and toxic emissions from GDF operations by improving CARB enhanced vapor recovery (EVR) regulation. Enhanced in-station diagnostics.					
FUG-03	Further Emission Reductions from Cutback Asphalt	SCAQMD	VOC		Reduce emissions from asphalt paving applications by limiting the use of cutback asphalt and/or replacing it with emulsified asphalt.				X	
FUG-04	Emission Reductions from Pipeline & Storage Tank Degassing	SCAQMD	VOC		Require the vapor space exhaust to be vented to an air pollution control device. Enhanced control technology; increased control efficiency; establish concentration limits; expand source categories (smaller tank, etc.).	X	X			X
CMB-01	NOx Reductions from Non-RECLAIM ovens, Dryers & Furnaces	SCAQMD	NOx		Use low-NOx burners through retrofit or replacement.	X	X		X	X
CMB-02	Reductions of Emissions in RECLAIM (BARCT)	SCAQMD	SOx		Identifies a series of control approaches as part of (BARCT) to seek further reduction in SOx allocation. SOx reduction controls (i.e., sulfur recovery, etc).	X	X		X	X
CMB-03	Further NOx Reductions from Space Heaters	SCAQMD	NOx		Establish more stringent emission limits for new space heaters through use of low-NOx burners and heat pumps.		X			X
CMB-04	Natural Gas Fuel Specifications	SCAQMD	NOx	1, 2	Establish an upper limit of the heating value of natural gas.					
BCM-01	PM Control Devices (Baghouses/Wet Scrubbers/Electrostatic Precipitators, Other Devices)	SCAQMD	PM		Install Continuous Opacity Monitor System or Bag Leak Detection System for top process emitters. Baghouse filter; ventilation/hood systems.	X	X		X	X

TABLE ES-3  
2007 AQMP CONTROL MEASURE ENVIRONMENTAL ANALYSIS

Control Measure No.	AQMP Control Measure Description	Agency	Pollutant	Not Significant	Control Measure	Potential Impact				
						Secondary Air	Energy	Hazard	Water	Solid/Haz Waste
BCM-02	PM Emission Hot Spots-Localized Control Program	SCAQMD	PM		Establish a localized program to supplement the regional approach to address PM hot spots. Fencing; mowing; paving; soil stabilization; street sweeping; housekeeping.	X	X		X	
BCM-03	Emission Reductions from Wood Burning Fireplaces & Woodstoves	SCAQMD	PM		Include voluntary or mandatory wood burning curtailment during period of poor air quality. Certification standards; prohibit garbage burning.	X	X			X
BCM-04	Additional PM Emission Reductions from Rule 444-Open Burning	SCAQMD	PM		Reduce PM emissions through further reduction of open burning practices. Prohibit burns; alts to burn (shipping, grinding, composting, etc).	X	X			X
BCM-05	Emission Reductions from Under-fired Charbroilers	SCAQMD	PM		Seek to stimulate technology advancement in reducing PM emissions from under-fired charbroilers.	X	X			X
MCS-01	Facility Modernization	SCAQMD	ALL		Existing equipment retrofitted or replaced with BACT at the end of a pre-determined lifespan & use of super compliant materials/process change.	X	X		X	X
MCS-02	Urban Heat Island	SCAQMD	ALL	1	Provide incentives for voluntary actions to reduce VOC or NOx by lowering the ambient temp by use of reflective/lighter colored roofing and paving materials. Increase tree planting.					
MCS-03	Energy Efficiency & Conservation	SCAQMD	NOx		Provide incentives for businesses to use energy efficient equipment, early retirement of existing equipment.					X
MCS-04	Emissions Reduction from Greenwaste Composting	SCAQMD	VOC, PM, NH3		Development & implementation of BMPs that would aim for reductions of PM10, VOC, & NH3.	X	X			X
MCS-05	Emission Reductions from Non-dairy Livestock Waste	SCAQMD	VOC, PM, NH4		Require air pollution control devices for larger facilities & seek reductions from smaller facilities. Best mgmt practices (use of belt/drying system); enclosures; VOC/odor control (i.e. afterburner).	X	X		X	X
MCS-06	Improved Startup, Shutdown, & Turnaround Procedures	SCAQMD	ALL	1, 2	Reduce emissions during equipment startup, shutdown & turnaround procedures. Best mgmt practices.					
MCS-07	Application of All Feasible Measures	SCAQMD	ALL	Speculative	Attainment of further emission reductions through the amendment of existing rules & regs. Implement new BACT standard-all sources.					
CTS-05	Emission Charges of \$5,000 per Ton of VOC for Stationary Sources Emitting Over 10 Tons per Year	SCAQMD	VOC	Speculative	If the federal ambient air standards are not met by the year, impose an emissions fee of \$5,000 per ton of VOC, emitted by each major source in excess of 80 percent of the sources' baseline emissions.					

TABLE ES-3  
2007 AQMP CONTROL MEASURE ENVIRONMENTAL ANALYSIS

Control Measure No.	AQMP Control Measure Description	Agency	Pollutant	Not Significant	Control Measure	Potential Impact				
						Secondary Air	Energy	Hazard	Water	Solid/Haz Waste
FLX-01	Economic Incentive Programs	SCAQMD	ALL	Speculative	Complement command-and-control measures using an Intercredit Trading Program. Incentive program; early installation of advanced control technology.					
FLX-02	Petroleum Refinery Pilot Program	SCAQMD	VOC, SOx, PM	Speculative	Provide an alternative means of compliance to existing refineries (e.g. offsite reductions).					
EGM-01	Emission Reductions from New or Redevelopment Projects	SCAQMD	NOx, VOC, PM2.5		Mitigate significant impacts from new and redevelopment projects. Dust control/alt fuel; diesel PM filter; low-emitting engines; low VOC cigs; energy conservation; mitigation fee.	X	X	X	X	X
EGM-02	Emission Budget & Mitigation for General Conformity Projects	SCAQMD	ALL	Speculative	Determine emissions from each source category, offsetting emissions exceeding budgets & mitigation fees. Further control of all sources; mitigation fee.					
EGM-03	Emissions Mitigation at Federally Permitted Projects	SCAQMD	ALL	Speculative	Mitigation measures for federally permitted projects impacting the District. Further control of all sources; mitigation fee.					
MOB-01	Mitigation Fee Program for Federal Sources	SCAQMD	ALL	Speculative	Implement a mitigation fee program to be adopted by U.S. EPA.					
MOB-02	Expanded Exchange Program	SCAQMD	ALL		Expand lawn mower/leaf blower exchange programs. Low-emitting engines/electrical engines.	X	X			X
MOB-03	Backstop Measure for Indirect Sources of Emissions from Ports & Port-Related Facilities	SCAQMD	ALL		Address emissions from all stationary & mobile sources at ports & related facilities. PM filter/catalysts; use of non-diesel equipment (i.e., electrical, fuel cells, LNG, CNG, etc); alt diesel fuel (i.e. low sulfur, emulsified, etc); hoods, shoreside power (SCR); vessel speed reduction.	X	X	X	X	X
MOB-04	Emissions Reduction from Carl Moyer Program	SCAQMD	NOx, PM2.5	1, 4	Proposes to take credit for emission reductions achieved through past & future projects funded under this program for SIP purposes. Retrofit/repower engines (NOx control); early retirement.					
MOB-05	AB 923 Light-Duty Vehicle High Emitter Identification Program	SCAQMD	ALL		Identification of high-emitting on-road light-vehicles with owners offered the ability to repair or scrap their vehicles as part of the program.					X

TABLE ES-3  
2007 AQMP CONTROL MEASURE ENVIRONMENTAL ANALYSIS

Control Measure No.	AQMP Control Measure Description	Agency	Pollutant	Not Significant	Control Measure	Potential Impact				
						Secondary Air	Energy	Hazard	Water	Solid/Haz Waste
MOB-06	AB 923 Medium-Duty Vehicle High Emitter Identification Program	SCAQMD	ALL		Identification of high-emitting on-road medium-duty vehicles with owners offered the ability to repair or scrap their vehicles as part of the program.					X
MOB-07	Concurrent Reductions from Global Warming Strategies	SCAQMD	ALL	1, 2	Quantify concurrent emission reductions associated with GHG programs targeted at stationary and mobile sources in Basin. Renewable energy sources					X
<b>Control Measures for Sources Under State and Federal Jurisdiction</b>										
ARB-ONRD-01/SCONRD-04	Smog Check Improvements	CARB/EPA	VOC, NOx, PM	2, 3	Propose improvements to existing program for light & medium duty vehicles, including motorcycles. Testing (lower standards); inspections.					
ARB-ONRD-02	Expanded BAR Vehicle Retirement & Mandatory Part Replacement	CARB/EPA	VOC, NOx		Promote permanent retirement of eligible vehicles through financial incentives. Propose mandatory parts replacement after mileage cap.					X
ARB-ONRD-03/SCFUEL-01	CA Phase 3 Reformulation Gasoline Modifications	CARB/EPA	VOC, NOx		Offset the impacts of greater use of ethanol in low level blended gasoline through gasoline reformulation; remove ethanol.	X	X	X	X	
SCONRD-01	Accelerated Penetration of Partial Zero-Emission & Zero-Emission Vehicles	CARB/EPA	VOC, NOx, PM		Focus on implementation of technologies capable of achieving partial zero-tailpipe emissions. Alt fuels; advanced technology (partial zero emitting vehicles); old battery disposal.		X	X		X
SCFUEL-02	Greater use of Diesel Fuel Alternatives and Diesel Fuel Reformulation	CARB/EPA	NOx, PM		Two-phase approach to achieve add'l emissions from diesel fuel engines. Fuel reformulation; diesel alternatives (Fischer-Tropsch, biodiesel, emulsified).	X	X	X	X	
ARB-ONRD-04/SCONRD-03	Cleaner In Use Heavy Duty Trucks	CARB/EPA	VOC, NOx, PM		Comprehensive in-use diesel truck emissions reduction program that includes a fleet modernization and an enhanced screening and repair program. ARB's roadside heavy-duty vehicle inspection program would be include trucks that need emission control system repairs.	X	X	X		X
SCLTM-01B	Enhanced Inspection & In-Use Emissions Tracking of Heavy-Duty Vehicles	CARB/EPA	VOC, NOx, PM		Have CARB develop an expanded inspection & maintenance program for heavy-duty diesel vehicles. Testing; inspection; possible replacement					X
ARB-ONRD-05/SCONRD-04	Further Emissions Reductions from Heavy-Duty Trucks Providing Freight Drayage Services	CARB/EPA	VOC, NOx, PM		Retrofit or replace existing over-the-road trucks providing drayage serves at marine ports, intermodal facilities, or warehouses.	X	X			X
ARBOFFRD-04/SCOFFRD-06	Construction/Industrial Equipment Fleet Modernization	CARB/EPA	VOC, NOx, PM		New off-road diesel engines meet more stringent emissions standards. Accelerated engine replacement/retrofit/repower; alt fuels.	X	X			X

TABLE ES-3  
2007 AQMP CONTROL MEASURE ENVIRONMENTAL ANALYSIS

Control Measure No.	AQMP Control Measure Description	Agency	Pollutant	Not Significant	Control Measure	Potential Impact				
						Secondary Air	Energy	Hazard	Water	Solid/Haz Waste
ARB-OFFRD-05	Accelerated Turnover & Catalyst Based Standards for Pleasure Craft	CARB/EPA	VOC, NOx, PM		By 2014 outboard engines and personal watercraft meets Tier 3 standard levels. Accelerated retirement/retrofit engines.	X				X
ARB-OFFRD-6	More Stringent Exhaust Standards for Off-Road Recreational Vehicles	CARB/EPA	VOC, NOx		New emission standards and accelerated fleet turnover are proposed to reduce emissions from this category. Catalyst technology.	X				X
ARB-OFFRD-5/SCOFFRD-6	Evaporative Standards for Recreational Vehicles & Pleasure Craft	CARB/EPA	VOC		Through retrofit, incentives, and regulation, to reduce evaporative emissions. New evaporative standards.					X
ARB-OFFRD-2/SCOFFRD-03	Further Emission Reductions from Locomotives	CARB/EPA	NOx, PM		Operating in the Basin to meet Tier 3 equivalent emissions by 2014. Accelerated replacement; control tech (SCR, PM filters, hybrid battery engines).	X	X	X		X
ARB-OFFRD-3	Further Emission Reductions from Ocean-Going Marine Vessels & Harbor Craft While at Berth	CARB/EPA	VOC, NOx, SOx, PM		Require owners of existing commercial harbor craft to replace old engines with newer cleaner engines and/or add emission control technologies that clean up engine exhaust	X	X			X
SCOFFRD-02	Further Emission Reductions from Cargo Handling Equipment	CARB/EPA	NOx		Additional emission reductions from cargo handling equipment beyond the state reg. Accelerated retirement/retrofit (i.e., catalysts, PM traps, alt fuel-emulsified diesel)	X	X		X	X
ARB-OFFRD-1	Auxiliary Ship Engine Cold Ironing and Other Clean Technology. Cleaner Main Ship Engines and Fuel.	CARB/EPA	NOx, SOx, PM		Reduce emissions from ships in transit and at berth with at-dock technologies such as cold ironing (electrical power) and other clean technologies.	X	X	X	X	X
SCOFFRD-04	Emission Reductions from Airport Ground Support Equipment	CARB/EPA	VOC, NOx, PM		Reduce airport ground support equipment emissions primarily through electrification and emission standards.	X	X			X
ARB-CONS-1/SCLTM-03	Further Emission Reductions from Consumer Products	CARB/EPA	VOC		Achieve the maximum technologically & commercially feasible VOC emission reductions from consumer products. Ultra low VOC products.	X		X	X	
SCOFFRD-05	Further Emission Reductions from Truck Refrigeration Units	CARB/EPA	NOx		Requires regulations to reduce emissions from truck refrigeration units based on replacement with electric units or retrofits. Incentives to increase fleet turnover.	X	X			

TABLE ES-3  
2007 AQMP CONTROL MEASURE ENVIRONMENTAL ANALYSIS

Control Measure No.	AQMP Control Measure Description	Agency	Pollutant	Not Significant	Control Measure	Potential Impact				
						Secondary Air	Energy	Hazard	Water	Solid/Haz Waste
Long-Term Control Strategy[(182)(E)(5) Measures or "Black Box"]										
SCLTM-01 (A & B)	Further Emission Reductions from On-Road Mobile Sources	CARB/EPA	ALL		Further NOx reductions from on-road mobile source categories through 1) accelerated turn-over of high-emitting vehicles and penetration of ATPZEVs and ZEVs; and 2) expanded modernization of heavy-duty vehicles through replacements or retrofits; and 3) advanced cargo transportation technologies.		X			X
SCLTM-02	Further Emission Reductions from Off-Road Mobile Sources	CARB/EPA	ALL		Further Reductions from Off-Road Mobile Sources through 1) accelerated turn-over of existing equipment and vehicles and replacement with new equipment meeting the new engine standards; 2) retrofit of existing vehicles and equipment with add-on controls such as SCR; and 3) develop new engine standards (e.g., aircraft, ships).	X	X	X		X
SCLTM-03	Further Emission Reductions from Consumer Products	CARB/EPA	VOC		Implement low-VOC technologies developed for stationary sources into categories with similar uses in consumer products. Use of lower reactive VOC compounds could achieve equivalent reductions.	X		X	X	

1. Control technologies do not generate significant impacts
  2. Changes in operating practices with no impact identified.
  3. Changes in testing, inspection, or enforcement procedures with no
  4. Existing program that provides air quality benefits
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